Posters
English version

P042-e

Use of baclofen pump in the cerebral palsy of child: National survey of practice

C. Mietton [a,*], V. Gautheron [b], B. Dohin [b], C. Nuti [b], B. Fernandez [b], I. Poirot [c]
[a] *CHU Lyon Escale, 59, boulevard Pinel-Escale, aile A1, 69677 Bron, France*
[b] *CHU de Saint-Étienne, Saint-Étienne, France*
[c] *CHU Lyon HFME, Lyon, France*
*Corresponding author.
E-mail address: claire.mietton@yahoo.fr

Keywords: Physical Medicine and rehabilitation; Cerebral palsy; Children; Spasticity; Intrathecal baclofen

Aim.– The aim of this study was to shed a light on the current use of intrathecal baclofen delivered by pump infusion in France for cerebral palsy in children in order to standardize practice in that specific indication.

Material and methods.– We performed an observational study based on a standardized questionnaire sent to 29 pediatric PM&R services over the country. The questionnaire consisted in closed responses (yes or no).

Results.– Twenty-four services responded to the questionnaire. Cerebral palsy was the most common indication for pump implantation (23/24). Pre-test evaluation was performed in 22 cases and post-test evaluation in 21 cases, and early after implantation in 20 cases and late after implantation in 17 cases. Single shot infusion was the test favored by PM&R physicians in 15 cases. The pump was implanted in the subcutaneous tissue in 19 cases. Early complications were observed in 16 cases after pump implantation. Late complications were observed in two cases and consisted in catheter migration.

Conclusion.– In conclusion, the current study demonstrated large practice diversity over the country and highlighted to potential for complications due to the treatment. The follow-up of the treated patients was also non-uniform. It should be of interest to develop nationwide standardized strategies in order to improve and make uniform patient management.

http://dx.doi.org/10.1016/j.rehab.2013.07.1034

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Permanent mechanical deformation of an intrathecal baclofen pump secondary to altered pressure in scuba diving: A case report

N. Draulans [*], E. Roels, C. Kiekens, B. Nuttin, K. Peers
University Hospitals Leuven Herestraat, 49 3000 Leuven, Belgium
*Corresponding author.
E-mail address: nathalie_draulans@hotmail.com

Keywords: Spinal cord injury; Spasticity; Intrathecal baclofen therapy; Scuba diving

Introduction.– Intrathecal baclofen (ITB) therapy is a safe method for treating generalised spasticity which cannot be controlled by oral medication. Complications related to ITB therapy mostly consist of catheter related problems. Persons with a spinal cord injury are encouraged to be active even with an ITB pump and often take part in different sport activities.

Observations.– A 37-year-old male with a paraplegia T4 AIS A, secondary to a road traffic accident in 2003 presents at the outpatient clinic in September 2012 for refill of his ITB pump (SynchroMed II, Medtronic) placed in 2008 for uncontrollable spasticity of the lower limbs. Spasticity is well controlled and the patient doesn't have any specific complaints. During refill-procedure, only 27 mL can be injected in the reservoir whereas the reservoir of the pump is made to contain 40 mL. Anamnesis reveals that three weeks before, the patient went scuba diving to a depth of 30 m below sea level. He does not recall any altering of spasticity during or after diving. X-ray reveals a collaps of the bottom shield of the baclofen pump.

Discussion.– This is the first clinical case reported of a patient with a mechanical deformation of an ITB pump following scuba diving. Scuba diving with a SynchroMed II pump (Medtronic) is restricted by the company to a depth of ten meters or 33 feet below sea-level as testing has shown that the pump may be damaged during a single exposure when the pump is not full and exposed to pressures greater than 2.0 ATA (atmospheres absolute), or with repeated exposure to increased pressures even if they are less than 2.0 ATA. Besides the permanent effect of a collapsing bottom shield, there is the temporary effect of reduced flow rate.

Patients with an ITB pump should be warned for the risks associated with scuba diving and should not dive more than 10 m below sea level.

Further reading

Draulans N, Roels E, Kiekens C, Nuttin B, Peers K. Permanent mechanical deformation of an intrathecal baclofen pump secondary to altered pressure in scuba diving: a case report. Under revision in Spinal Cord.

http://dx.doi.org/10.1016/j.rehab.2013.07.1035

P044-e

Functional outcomes after surgery for heterotopic ossifications: 22 cases

K. Belhaj, A. Khadir, S. Meftah, Y. Abdelfattah, F. Lmidmani, A. El Fatimi
Service de médecine physique et de réadaptation fonctionnelle, CHU Ibn Rochd de Casablanca, quartier des hôpitaux, 20100 Casablanca, Morocco
E-mail address: ducari83@gmail.com

Keywords: Heterotopic ossifications; Functional surgery; Functional rehabilitation

Introduction.– Heterotopic ossification is a frequent complication occurring particularly in the aftermath of neurological damage. The functional impairment may be severe. The goal of surgery is to improve function.

The aim is to determine functional outcomes of patients undergoing surgery for heterotopic ossifications.

Patients and methods.– This was a prospective study of patients who underwent surgery for heterotopic ossifications followed by intensive rehabilitation care in our department from January 2009 to march 2013. The evaluation included a joint assessment and a functional assessment for each affected joint.

Results.– There were 22 patients (29 operated joints), predominantly male (82%) and the average age 31.6 years (19–41 years). Nineteen traumatic brain injury patients and three injury spinal cord patients. Operated joints were: knee ($n = 11$, 38%), elbows ($n = 11$, 38%), hips ($n = 7$, 24%). All patients received physical therapy based mainly on continuous passive mobilization of the elbow or knee in addition to functional work. For operated hips, the Postel Merle d'Aubigné (PMA) score improved from 6.5 to 8. In patients who had knee surgery, the functional status improved: one patient recovered ability to walk and the others a good sitting position. For patients who had elbow surgery, the functional assessment revealed improved possibilities for global nutrition (hand-mouth), hygiene (hand-face) and grooming (hand-neck).

Discussion and conclusion.– The main objective of surgery for heterotopic ossifications is to restore joint mobility and function. Appropriate rehabilitation in an experienced PRM unit greatly contributes to improved functional capacities.

Further reading

Genet F, et al. Impact of late surgical intervention on heterotopic ossification of the hip after traumatic neurological injury. J Bone Joint Surg BR 2009;91:1493–8.

Rafai M, et al. Les para-ostéoarthropathies neurogènes de la hanche. Rev Maroc Chir Orthop Traumatol 2005;23:36–41.

http://dx.doi.org/10.1016/j.rehab.2013.07.1036

P045-e

Isotopic scintigraphy coupled to tomodensitometry: Interest in the diagnosis of baclofen pump dysfonction

F. Frémondière [a,*], V. Saoût [b], A.-L. Ferrapie [b], F. Lacoeuille [c], O. Couturier [c], P. Menei [d], I. Richard [a], M. Dinomais [a]
[a] *Département de médecine physique et de réadaptation, université d'Angers, CHU d'Angers, 4, rue Larrey, 49100 Angers, France*